Center Independent Research & Development: GSFC IRAD

An Advance Open Architecture Astrometric Alignment Sensor for Distributed & Non-Distributed GN&C Systems

Completed Technology Project (2013 - 2014)

Project Introduction

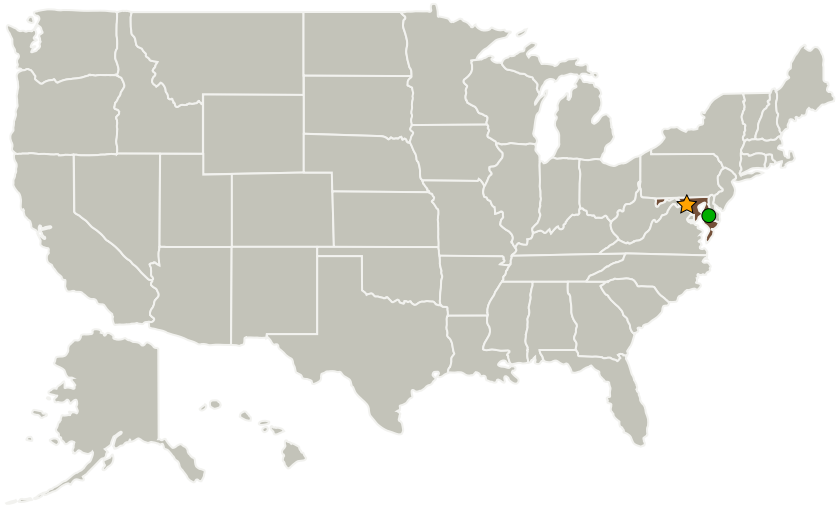
This IRAD will advance the technology to provide a stellar sensor that may be used for astrometric alignments necessary for Formation Flying/Relative Navigation related missions. The objective of this project is to develop an advanced stellar sensor for astrometric alignment and other challenging SmallSat-class Formation Flying/Relative Navigation missions such as the Virtual Telescope (VT) concept.

The prototype will be a assembly consisting of a small, low powered electronics box, stellar detector and a lens assembly with a manual fine focus feature.

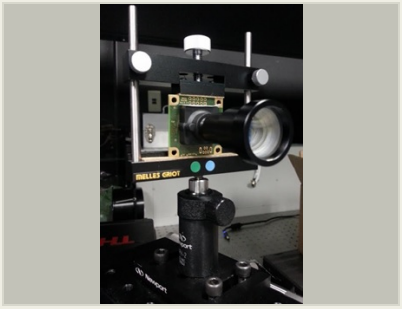
Anticipated Benefits

N/A

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Goddard Space Flight Center(GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland
Wallops Flight Facility(WFF)	Supporting Organization	NASA Facility	Wallops Island, Virginia



Astrometric Alignment Sensor

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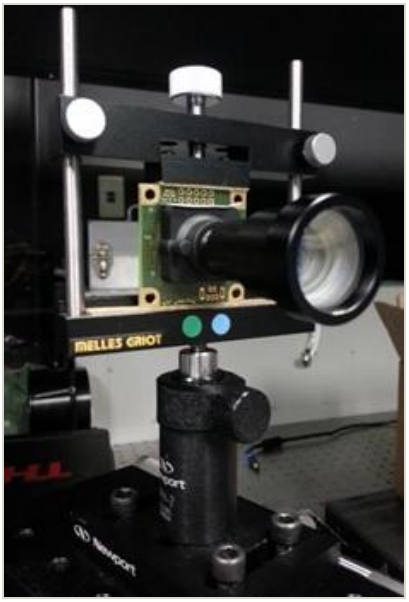
Primary U.S. Work Locations
Maryland

Images



An Advance Open Architecture Astrometric Alignment Sensor for Distributed & Non-Distributed GN&C Systems Project
Astrometric Alignment Sensor
(https://techport.nasa.gov/image/3993)

Project Website:

http://sciences.gsfc.nasa.gov/sed/

Organizational Responsibility

Responsible Mission Directorate:

Mission Support Directorate (MSD)

Lead Center / Facility:

Goddard Space Flight Center (GSFC)

Responsible Program:

Center Independent Research & Development: GSFC IRAD

Project Management

Program Manager:

Peter M Hughes

Project Manager:

John C Adams

Principal Investigator:

Sean R Semper

Co-Investigator:

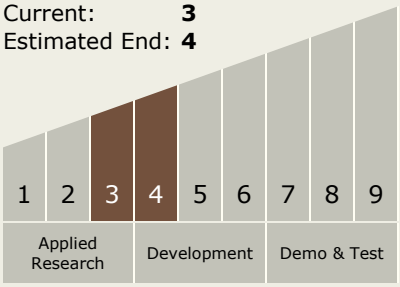
Robert W Moss

An Advance Open Architecture Astrometric Alignment Sensor for Distributed & Non-Distributed GN&C Systems

Completed Technology Project (2013 - 2014)

Technology Maturity (TRL)

Start: **3**
Current: **3**
Estimated End: **4**



Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  - TX06.3 Human Health and Performance
    - TX06.3.4 Contact-less / Wearable Human Health and Performance Monitoring